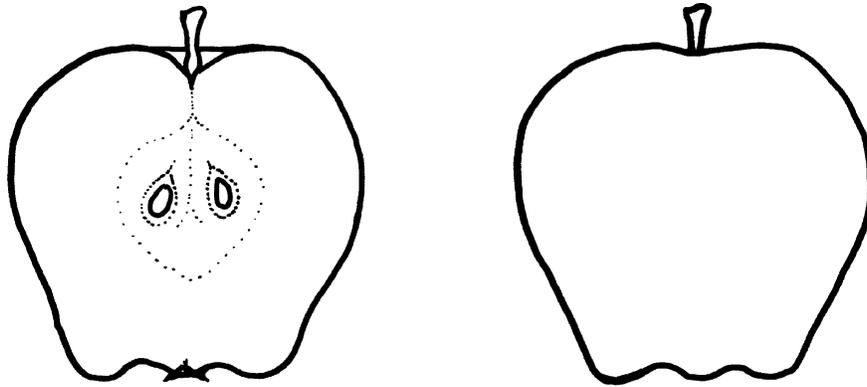


Apple Record Page

Scientist Names: _____

1. What will happen to our apple if _____

2. This is what we did to our apple.
Draw a picture here.



Write what you did to your apple here.

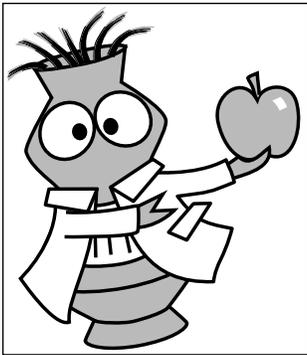
3. We think our apple will _____

4. This is a record of what happened to our apple.

Date	Our Experimental Apple	The Control Apple

5. After _____ days, our apple _____

Take-home Activity 2: So You Want to Be an Eggs-pert Scientist!



At school, your child is learning how to use a scientific model of a tooth (an apple) to investigate tooth decay. In this take-home investigation, you will use another model of a tooth (an egg) to find out what a weak acid can do to a hard surface, like the surface of a tooth.

Materials

egg cup
vinegar plastic wrap

Procedure

Day 1

1. **Begin the activity by observing the egg.** Look at the eggshell and feel it. Is it hard or soft? Is it smooth or bumpy? Is it cool or warm? Look out—don't drop it! Is an egg anything like a tooth?
2. **Place the egg in the cup.** Help your child carefully pour vinegar, a weak acid, over the egg until it completely covers the egg. Watch the egg for 5 minutes. What do you see? Cover the cup with plastic wrap. Leave the egg sitting on the counter for about a day. Write down the date and time when you set up the investigation on the Certificate of Completion.
3. **Discuss with your child what you think might happen to the egg.** Write down your guesses.

Day 2

1. **Get ready to check the egg!** Write down today's date and time on the Certificate. Carefully pour the vinegar into another cup or down the drain. Observe the egg. What happened to the shell? Is the shell hard or soft? Is the shell smooth or bumpy? Is it cool or warm? Talk about your observations and write down the results.
2. **Gently try to poke a hole in the eggshell with a pencil.** Watch out! Do this over a sink. What happens?
3. **Answer the questions on the Certificate of Completion.** Then, throw away the egg when you are finished. Do *not* eat it.

Certificate of Completion

(complete and return to your child's teacher)

Date and time investigation started: _____

Our guess was that the egg would: _____

Date and time finished: _____ We left the egg in vinegar for _____ hours.

At the end of the investigation, the egg was: _____

Background Information

In this take-home activity, you will do an investigation to find out what acid can do to an egg. The egg serves as a model for a tooth. You might ask, “How is an egg like a tooth?” The shell of an egg is hard like the outer surface of a tooth. Both are soft on the inside. In fact, many of the same minerals are in both the tooth enamel and an eggshell.

Scientists often use models. A model, although not the same as the real object, helps scientists learn about things that are difficult to study with a direct experiment. If scientists need to find out if a new chemical is safe for humans to use, they often test the chemical on animals, such as rats or mice. Safety engineers use crash dummies to test the effectiveness of seat belts and air bags in automobiles. The information that scientists learn using models helps them make predictions about real-life situations.

At school, students are using apples as models of a tooth. They are poking holes in the apples and waiting to see what happens to them, particularly around the holes. In this take-home activity, you are exposing the hard surface of an egg to a weak acid and waiting to see what happens to the eggshell. Both of these investigations use models and provide students with experiences they can use to make predictions about what might happen when a tooth has a cavity (hole) in it or when a tooth is exposed to the weak acids that are produced in all of our mouths. Students will learn more about the acids that can cause tooth decay. In this way, students are modeling the way real science works.

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What do you think happens to your teeth when there are acids in your mouth?

Which do you think is a better model for a tooth, an apple or an egg? Why?

Parent's or guardian's signature _____